

Governor's Advisory Commission on Intermodal Transportation

**2019-2028 Draft Ten Year Plan Overview
Public Hearings
Fall 2017**

Presentation Outline

- GACIT Process Overview
- Current State of Infrastructure
- Ten Year Plan Funding Synopsis
- Unfunded Needs
- Supplement Information Review
- Regional Planning Commission – Regional Philosophy
- Public Comments

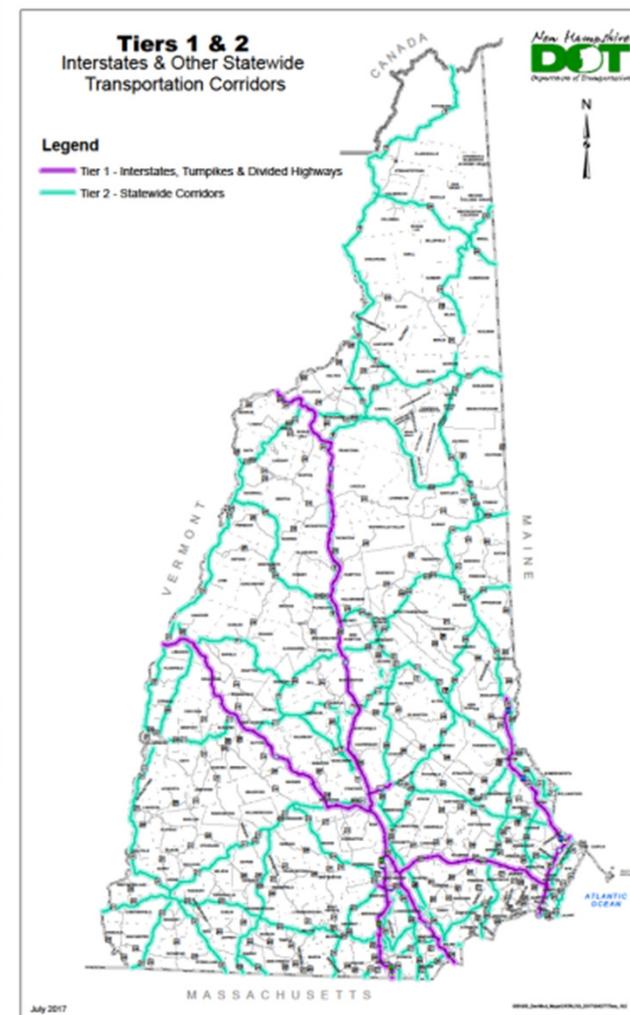
Ten Year Plan Process

- April 2017 - Community outreach and regional prioritization by RPCs
- July 19th – Initial GACIT meeting
- August 2017 – Meetings with RPCs Executive Directors
- August 23, 2017 - Draft TYP (2019-2028) Release
- **September – October 2017 – 19 Public Hearings**
- November 2017 – GACIT meetings & revisions
- December 2017 - Governor’s review & revisions
- January 15, 2018 - Governor’s Draft TYP transmittal to Legislature
- January - May 2018 - Legislative review & revisions
- June 2018 – Final TYP (2019-2028) Adopted into Law

TYP Process - Pursuant to RSA 228:99 & RSA 240

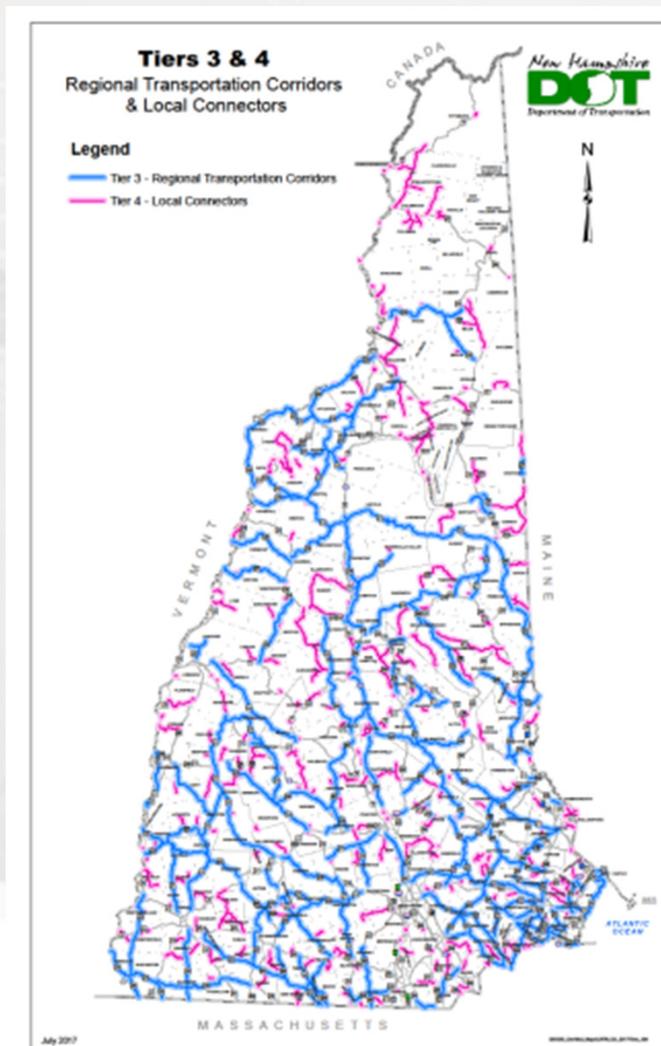
Current State of Infrastructure (Tiers)

- Tiers 1 & 2 (Statewide Transportation Corridors)
 - Tier 1 – Interstates, Turnpikes & Divided Hwys
 - Tier 2 – Major Statewide Corridors (US 4, US 3, NH 10, NH 25)
 - These are typically higher volume, higher speed facilities. Important for commuters, tourism, and freight movement of goods

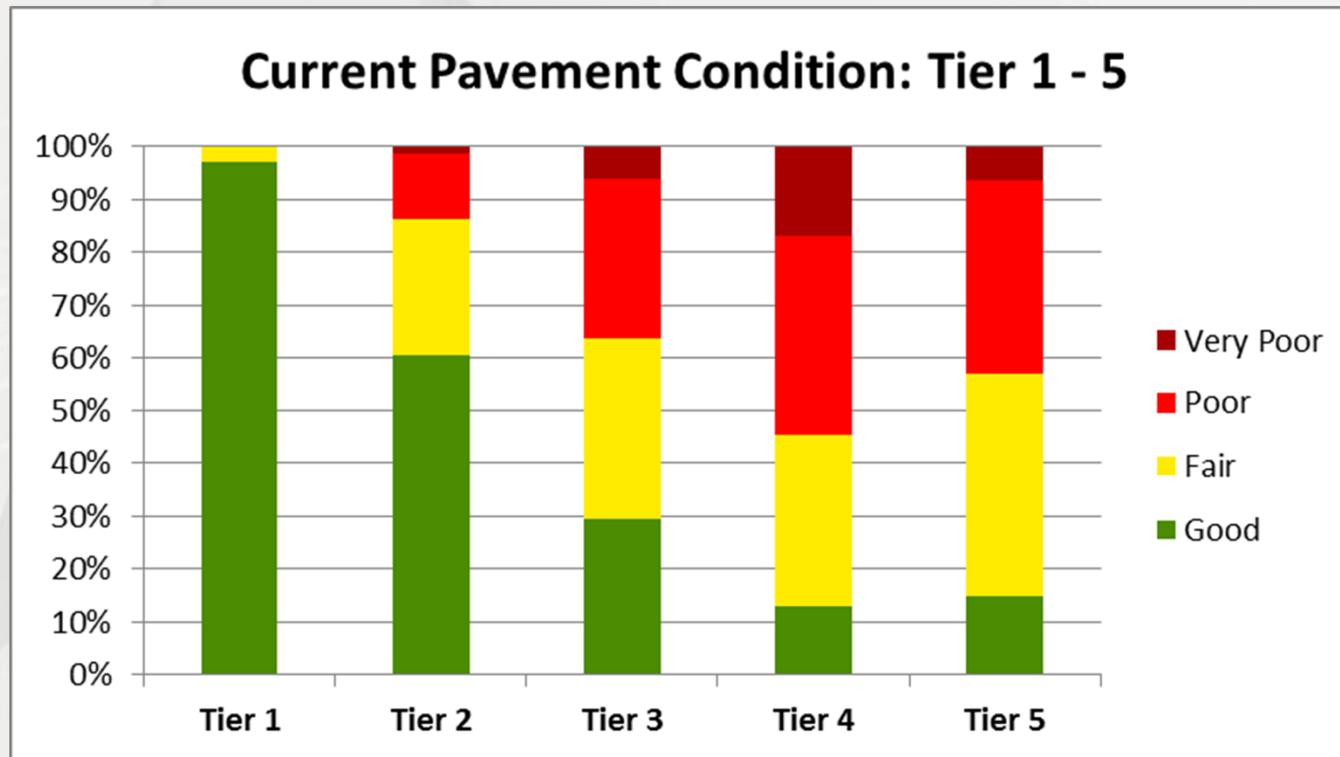


Current State of Infrastructure (Tiers)

- Tiers 3 & 4 (Regional Corridors & Local Connectors)
 - Tier 3 – Regional Corridors (Rte. 140, Rte. 135, Rte. 112, Rte. 108). Moderate speeds, moderate traffic volumes, provide connectivity within regions
 - Tier 4 – Secondary Highways & Unnumbered state roads (Route 103A in Sunapee or Lowell Rd in Windham). Usually low speed, low traffic volumes, provide local connections within or between communities



Current State of Infrastructure (con't)



- Tiers 1 & 2 – 91% of roads are in good or fair condition
- Tiers 3 & 4 – 57% of roads are in good or fair condition
- Overall, 72% of NH's roads (state) are good/fair
Conversely, 28% (1,172 miles) are poor/very poor condition

Current State of Infrastructure (Roads)



Tier 3: NH 129 (Loudon)



Tier 3: NH 12A (Alstead)



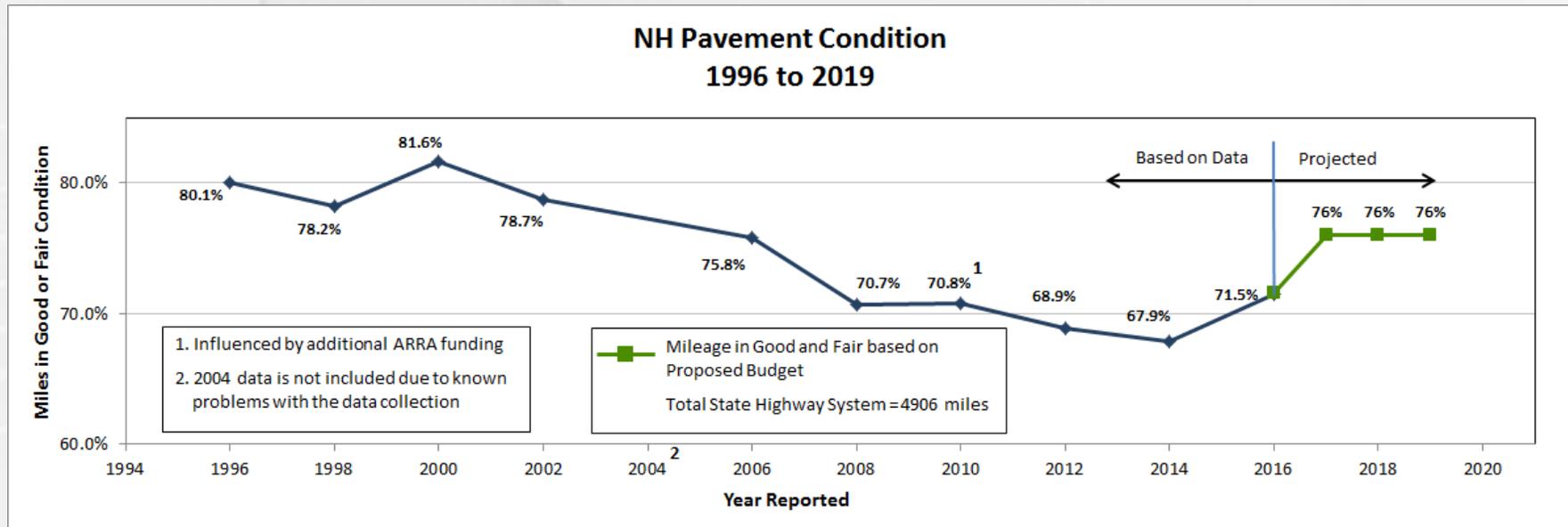
Tier 4: Rhododendron Road (Fitzwilliam)



Tier 4: Village Road (Surry)

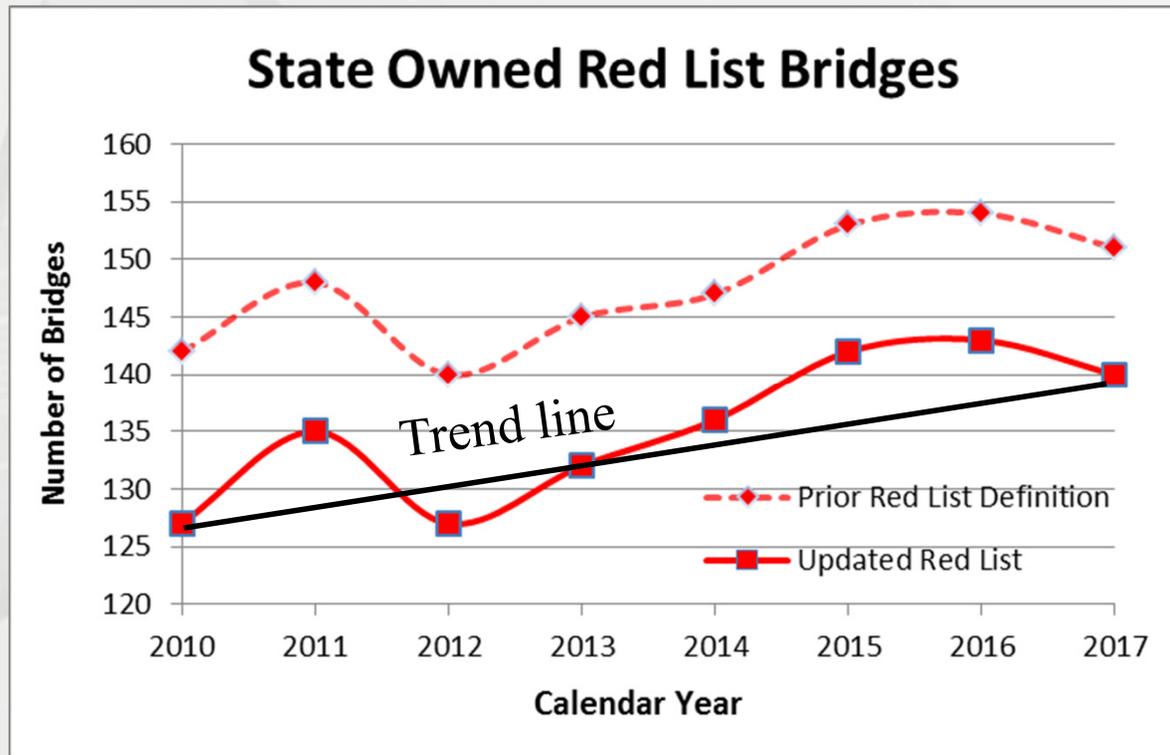
Above photos depict representative conditions on poor and very poor Tier 3 & 4 roads

Current State of Infrastructure



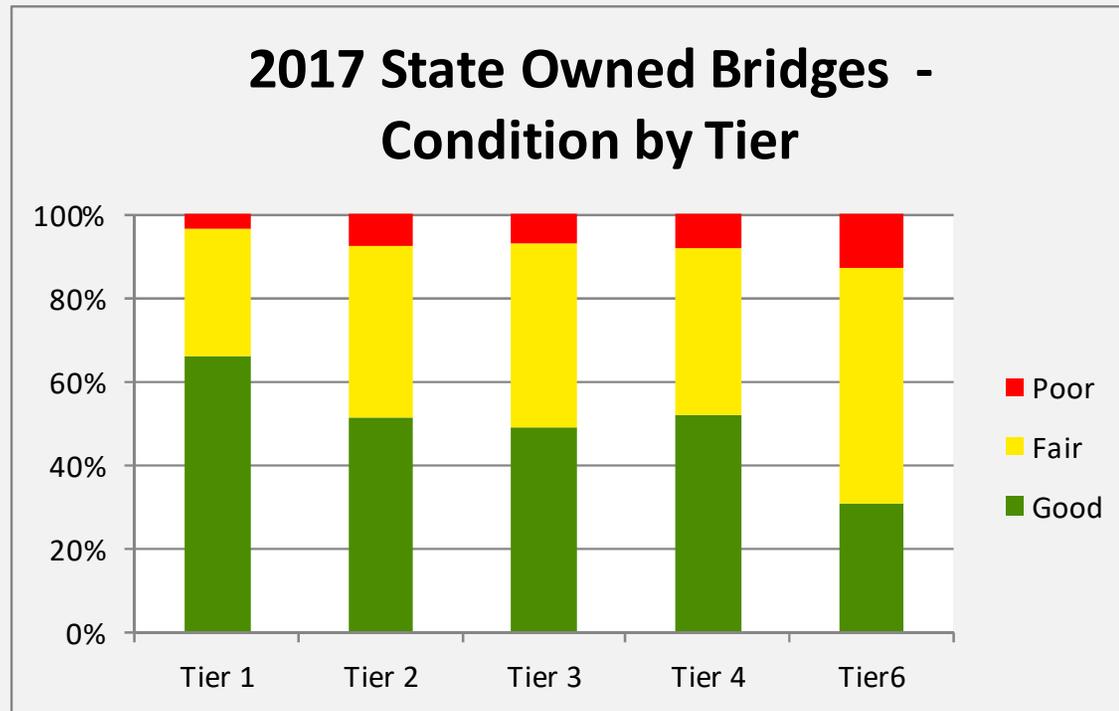
- Overall % of Good & Fair Roads was on a downward trend over a 14 year period (2000 – 2014)
- That trend is now showing an upswing in condition due to the increased level of investment in pavement
- 72% of State Roads are in Good or Fair condition which is up 4% from conditions in 2014

Current State of Infrastructure (con't)



- The number of state owned red list bridges (poor condition) has trended upward over the last 7 years.
- Over the last 5 years, on average 22 bridges per year added to the red list with 21 bridges per year removed from the red list
- Today (2017), 6.5% of State owned bridges or 140 are in poor condition.
- This total reflects recent change in the red list definition as only bridges in poor condition are included (11 less)

Current State of Infrastructure (con't)



Red List Bridges	17	45	37	33	8
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- Presently (2017) - 140 State Red-List Bridges (new definition)
- Tiers 1 & 2 – 3% (62 bridges) in poor condition (red list)
- Tiers 3,4,6 – 4% (78 bridges) in poor condition (red list)
- Tier 5 - Additionally 254 Municipal Red-List Bridges (2017)

Current State of Infrastructure (Bridges)



Above photos depict a bridge in Lancaster on Tier 2 Roadway – listed as Priority #4 on State's Red-List Bridges

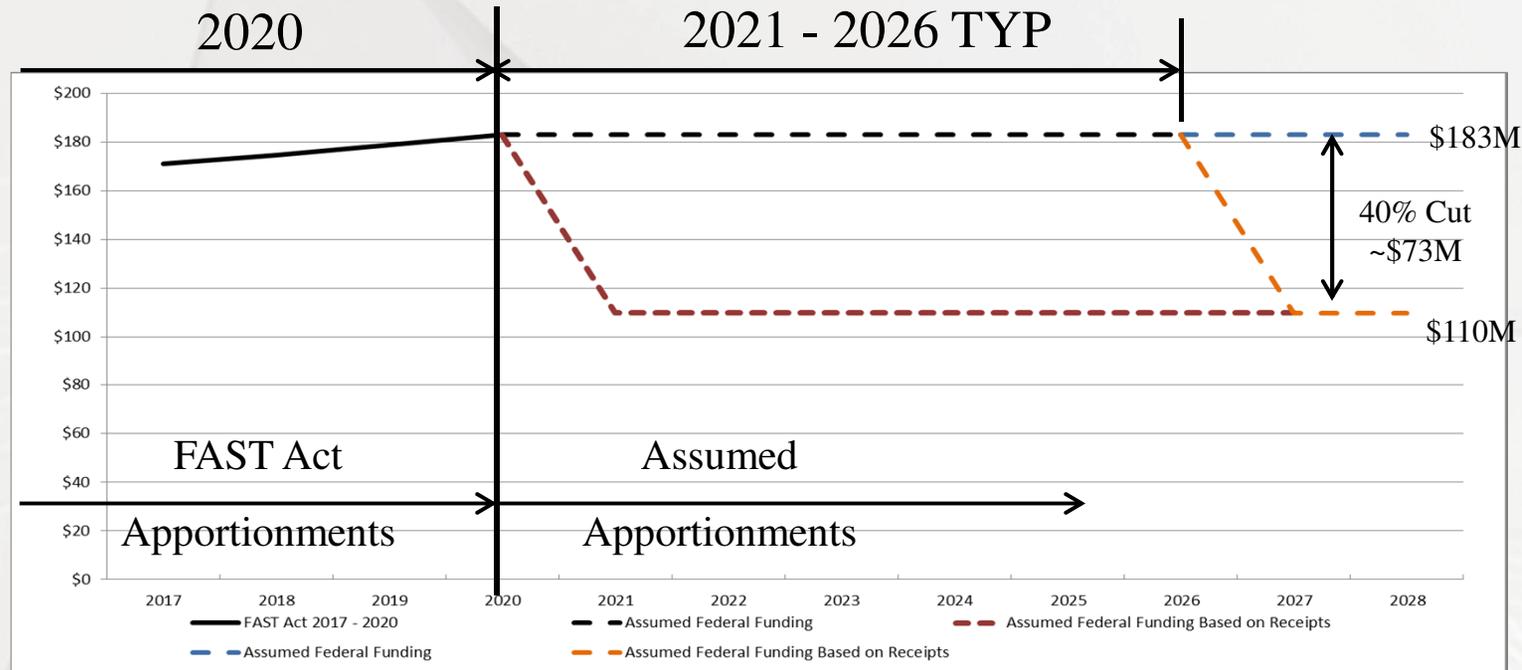
- US 2 over Connecticut River
- First placed on Red List in 2013
- In TYP for replacement in 2019 (SB367 TIFIA Pledged Revenue)

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Proposed Draft Ten Year Plan Strategies

1. Focus on Pavement Preservation
 - “Keeping good roads good”
 - Maintenance and Preservation strategies on existing system
2. Focus on Red List Bridges & Bridge Preservation
 - Funding to address State’s Red List Bridge backlog
 - Funding for bridge preservation work to extend bridge life
3. Dedicated SB367 funds for TIFIA loan pledged rural roads & bridges
4. Completion of I-93 & Funding for Exit 4A
5. Heightened Financial Constraint
 - FAST Act federal funding thru FY20
 - Fully financially constrained TYP
 - Increased level of accountability, predictability & ability to deliver

Federal Funding Status



- FAST Act federal funding 2016-2020 (\$167.6M-\$183M)
- \$183M Federal funding assumed 2021-2026
- Approximately \$42M rescission possible in 2020
 - will reduce the flexibility in how the apportionment is used on projects
- Approximately 40% reduction possible (\$73M) based on federal gas tax receipts
 - could result in a \$110 M federal program per year

Draft TYP Funding Synopsis

Typical Annual Funding Utilization

FAST Act Federal Funding approximately \$183M/year

- Paving & Bridge Projects (avg.): \$84M
- Mandated Federal (CMAQ, TA, SPR, HSIP, LTAP, etc): \$34M
- GARVEE Debt Service through 2025 (\$7.3M 2026-28): \$24M

Annual Dedicated Funding: \$142M/year

- Individual Roadway Projects (remainder funding): avg. - \$41M/year

Transit Funding (FTA): averages \$32 M/year

Airport Funding (FAA): averages \$26 M/year

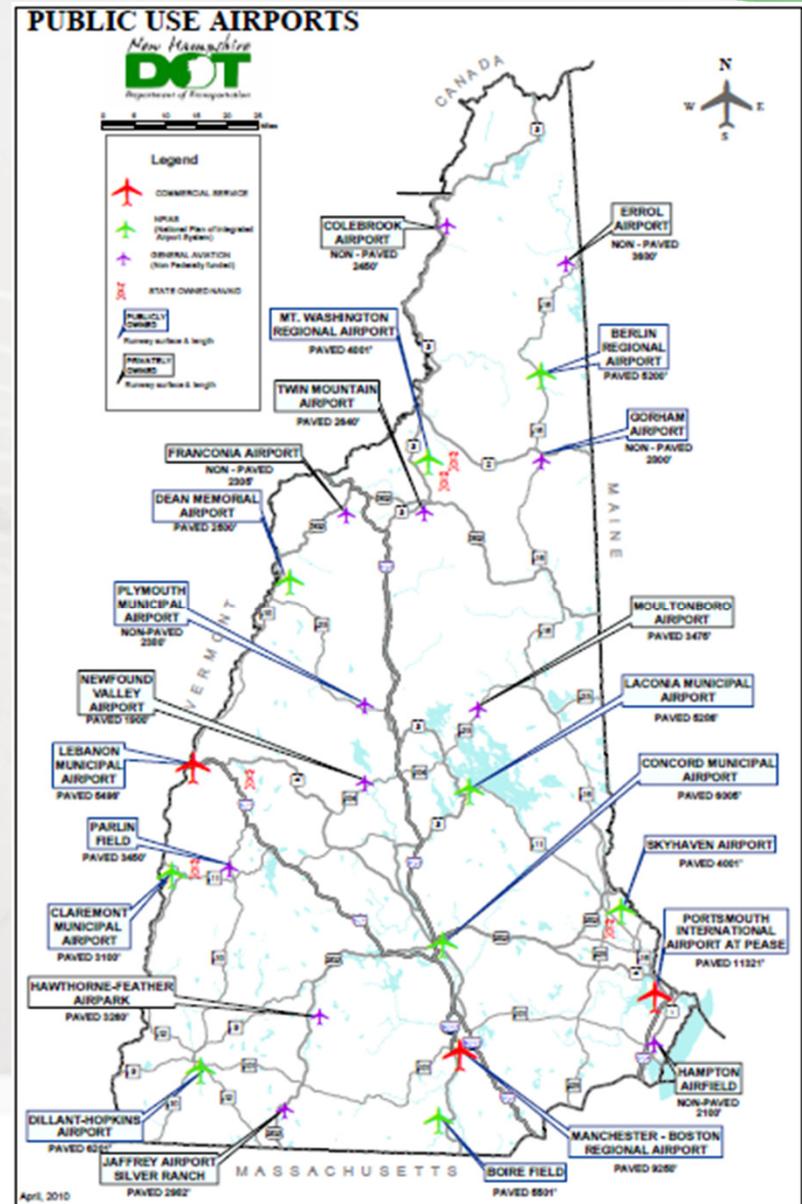
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Airport Funding

- Total of \$256M programmed in draft TYP (avg. \$25.6M/yr)
- Funding primarily Federal Aviation Administration (FAA)
 - Grants Based (Discretionary, Entitlement & State Apportionment)
 - Formula Apportionment
 - Based on FAA Designated Priorities Nationally & Regionally
- Funding restricted for planning studies, preservation, modernization, or expansion of eligible airport facilities.
Funding cannot be transferred to other transportation modes.
- NH eligible public-use airports, typically 90% FAA funds, 5% State funds & 5% local funds
- 12 Project Locations in draft TYP

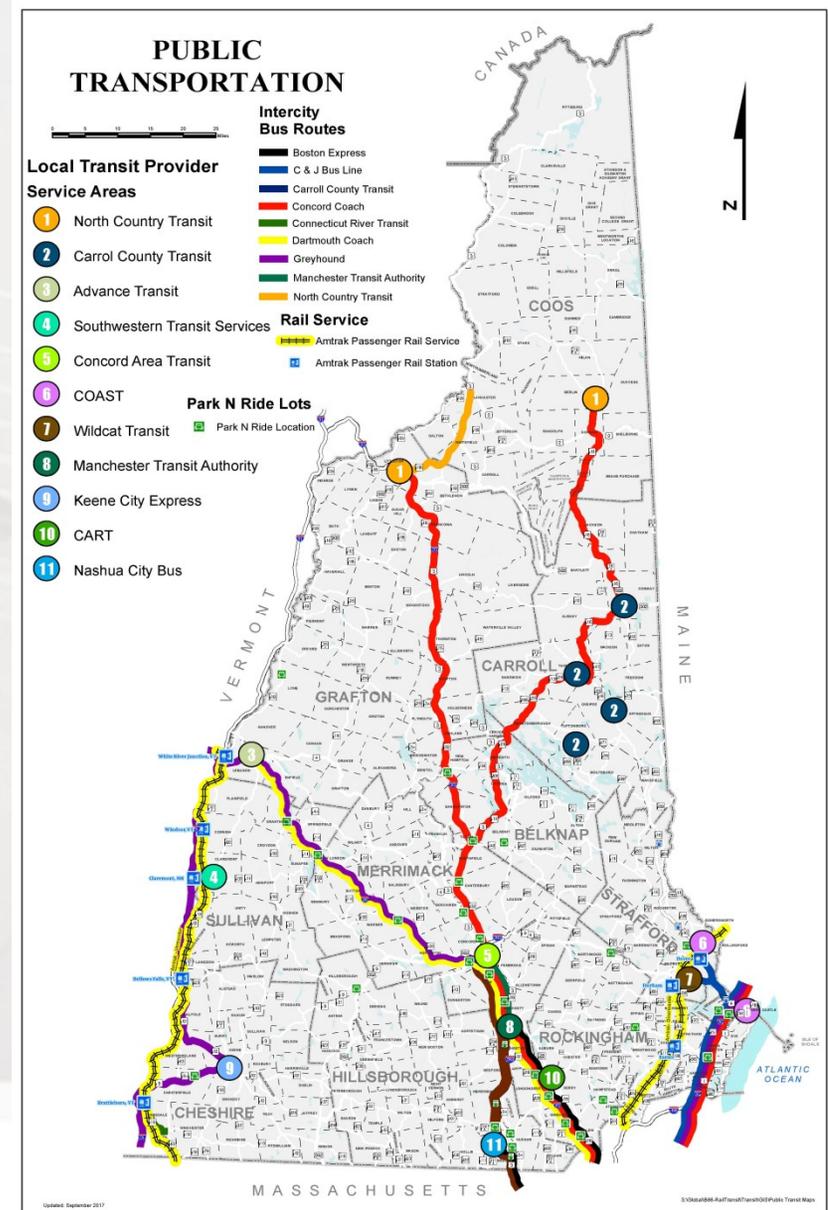
Airport Locations

- Federally Eligible Airports
 - 3 Commercial Airports (Portsmouth, Manchester & Lebanon)
 - 9 Publicly-Owned Airports (Berlin, Mt Washington, Dean Memorial, Laconia, Claremont, Skyhaven, Concord, Dillant-Hopkins & Boire Field)
- Non-Fed. Eligible Airports
 - 12 General Aviation (public & privately owned) Airports are not federally eligible



Transit Funding

- Total of \$324M programmed in draft TYP (average \$32M/yr)
- Funding primarily Federal Transit Administration (FTA)
- Funding restricted for transit services (i.e., capital, operating, & planning).
Funding cannot be transferred to other uses.



Draft TYP Funding Synopsis (con't)

Betterment Funding \$22M/year

- Preservation & Maintenance (Roads & Bridges)

Turnpike Funding for Capital & TRR averages \$63M/year

SB367 Funding for I-93 Expansion, SAB, TIFIA DS

- \$30M per year net of Municipal Block Grant Aid
- State Aid Bridge: \$6.8M/year
- I-93 Debt Service: Averages \$2.0M/year (thru 2025)
- TIFIA Pledged Paving & Bridge Work: \$12M/year (paving)
\$ 9M/year (bridges)
- I-93 Debt Service 2026-2034 increases to \$23.4M/year

Draft TYP (2019 – 2028) Funding

DRAFT 2019-2028 Ten Year Plan Total Program Dollars by FY

FY	Highway and Bridge										Other Modes					TYP FY Total	% of Total Program
	Highway Funded										Non-Highway Funded						
	FHWA	TIFIA Financing I-93	CT River Bridge GARVEE	Betterment	SB367			SAH	Other Matching Funds	Sub Total	Turnpike Improvement	Turnpike R&R	Rail	Transit	Airport		
SAB					I-93 Debt Service	TIFIA Pledged Paving & Bridge											
2019	\$ 181.33	\$ 5.74	\$ 20.72	\$ 22.33	\$ 8.77	\$ 1.35	\$ 19.90	\$ 3.34	\$ 11.12	274.60	\$ 34.80	\$ 14.30	\$ 2.10	\$ 29.33	\$ 31.10	386.23	10.3%
2020	\$ 183.44	\$ 5.89	\$ 25.09	\$ 22.46	\$ 10.72	\$ 1.86	\$ 22.75	\$ 2.45	\$ 14.63	289.29	\$ 44.20	\$ 12.30	\$ 0.60	\$ 29.76	\$ 52.98	429.12	11.5%
2021	\$ 188.82	\$ -	\$ 15.57	\$ 22.43	\$ 8.50	\$ 2.15	\$ 20.18	\$ -	\$ 1.84	259.49	\$ 46.35	\$ 13.20	\$ 0.60	\$ 29.46	\$ 25.92	375.01	10.0%
2022	\$ 187.06	\$ -	\$ -	\$ 22.43	\$ 10.92	\$ 2.20	\$ 19.95	\$ -	\$ 2.15	244.70	\$ 33.10	\$ 13.90	\$ 2.10	\$ 32.00	\$ 14.66	340.45	9.1%
2023	\$ 184.63	\$ -	\$ -	\$ 22.43	\$ 13.54	\$ 2.20	\$ 19.01	\$ -	\$ 1.43	243.24	\$ 50.60	\$ 14.40	\$ 0.60	\$ 30.82	\$ 27.78	367.44	9.8%
2024	\$ 184.97	\$ -	\$ -	\$ 22.43	\$ 8.50	\$ 2.20	\$ 21.48	\$ -	\$ 1.24	240.82	\$ 61.70	\$ 13.30	\$ 0.60	\$ 31.49	\$ 18.20	366.11	9.8%
2025	\$ 185.07	\$ -	\$ -	\$ 22.43	\$ 8.50	\$ 2.19	\$ 17.39	\$ -	\$ 2.95	238.53	\$ 52.00	\$ 13.60	\$ 2.10	\$ 34.23	\$ 20.40	360.86	9.7%
2026	\$ 187.53	\$ -	\$ -	\$ 22.43	\$ 8.50	\$ 23.41	\$ -	\$ -	\$ 0.55	242.42	\$ 57.60	\$ 13.80	\$ 0.60	\$ 33.60	\$ 23.36	371.37	9.9%
2027	\$ 184.59	\$ -	\$ -	\$ 22.43	\$ 8.50	\$ 23.41	\$ -	\$ -	\$ 0.19	239.11	\$ 51.80	\$ 14.10	\$ 0.60	\$ 39.16	\$ 21.54	366.31	9.8%
2028	\$ 186.76	\$ -	\$ -	\$ 22.43	\$ 8.50	\$ 23.41	\$ -	\$ -	\$ 1.77	242.86	\$ 61.40	\$ 14.40	\$ 2.10	\$ 34.19	\$ 20.18	375.13	10.0%
Program Total	1,854.20	11.64	61.37	224.19	94.94	84.36	140.66	5.79	37.89	2,515.04	493.55	137.30	12.00	324.03	256.11	3,738.03	100.0%
% of Total Program	73.7%	0.5%	2.4%	8.9%	3.8%	3.4%	5.6%	0.2%	1.5%	100.0%							

Revenue	\$1,853.01	\$11.64	\$61.37	\$224.19	\$307.01			\$5.79	\$37.89	\$ 2,500.90	\$ 493.55	\$ 137.30	\$ 12.00	\$ 324.03	\$ 256.11	\$ 3,723.90	
	\$2,500.90																
Surplus/(Deficit)	(\$1.19)	\$0.00	\$0.00	\$0.00	(\$12.95)			\$0.00	\$0.00	\$ (14.14)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (14.14)	
	(\$14.14)																

- FY19-FY28 Estimated Program Expenditures**

- Highway Funded (state & federal) – Average \$252M per year
- Turnpike Funded – Average \$63M per year for TRR & Tpk Capital
- Other Modes - Average \$60M per year
- Constrained over 10-year period

Ten Year Plan Total Program Dollar Comparison

Average Year (10 years)	Highway and Bridge										Other Modes					TYP FY Total
	Highway Funded										Non-Highway Funded					
	FHWA	TIFIA Financing I-93	CT River Bridge GARVEE	Betterment	SB367			SAH	Other Matching Funds	Sub Total	Turnpike Improve- ment	Turnpike R&R	Rail	Transit	Airport	
					SAB	I-93 Debt Service	TIFIA Pledged Paving & Bridge									
17-26 TYP	183.8	18.0	6.1	22.0	9.6	4.2	18.1	2.7	5.7	269.6	35.0	11.1	1.1	32.4	26.1	375.3
19-28 TYP	185.4	1.2	6.1	22.4	9.5	8.4	14.1	0.6	3.8	251.5	49.4	13.7	1.2	32.4	25.6	373.8

- **TYP Program Comparison**

- Draft TYP total shows a \$15M reduction from the current plan (\$1.5M/year)
- Highway Funded (state & federal) – Average \$252M per year for current draft compared to \$270M in the current plan (\$187M decrease)
 - Difference is found in TIFIA Financing, TIFIA pledged paving & bridge, & TIFIA Debt Service (fewer years remain and DS payment increases in 2026-2028) (\$147M decrease)
 - Elimination of SAH program (\$21M decrease)
- Turnpike Funded – Average \$63M per year for TRR & Tpk Capital for current draft compared to \$46M in the current plan (\$170M increase)
 - \$17M/year reduction in debt service payments → increase in capital program
- Other Modes - Average \$60M per year are similar

Draft TYP (2019 – 2028) Funding

2019-2028 Ten Year Plan All Funding

FISCAL YEAR	PAVEMENT	BRIDGES	I-93 EXPANSION	MANDATED FEDERAL	INDIVIDUAL PROJECTS	ROADSIDE	RAIL	TRANSIT	AIRPORTS	DEBT SERVICE	GRAND TOTAL
2019	76.19	91.03	26.15	30.03	71.15	8.12	2.10	29.80	31.10	20.55	386.23
2020	74.85	109.13	26.88	31.00	66.78	8.47	0.60	29.76	52.98	28.68	429.12
2021	80.70	99.02	11.00	33.72	58.57	8.47	0.60	29.46	25.92	27.56	375.01
2022	78.53	63.82	16.50	33.17	63.86	8.47	2.10	32.00	14.66	27.35	340.45
2023	76.10	74.82	0.00	33.17	88.66	8.47	0.60	30.82	27.78	27.02	367.44
2024	81.24	56.95	0.00	33.17	109.32	8.47	0.60	31.49	18.20	26.67	366.11
2025	84.50	58.78	0.00	33.17	92.94	8.47	2.10	34.23	20.40	26.28	360.86
2026	85.03	62.95	0.00	32.82	91.84	10.47	0.60	33.60	23.36	30.72	371.37
2027	71.88	70.49	0.00	32.84	88.66	10.47	0.60	39.16	21.54	30.67	366.31
2028	72.18	72.99	0.00	32.84	99.56	10.47	2.10	34.19	20.18	30.62	375.13
Total	781.19	759.99	80.53	325.92	831.36	90.31	12.00	324.51	256.11	276.13	3738.03
% Grand Total	20.9%	20.3%	2.2%	8.7%	22.2%	2.4%	0.3%	8.7%	6.9%	7.4%	100.0%

~ Dollars include indirect costs and inflation (2.55%)

23-Aug-17

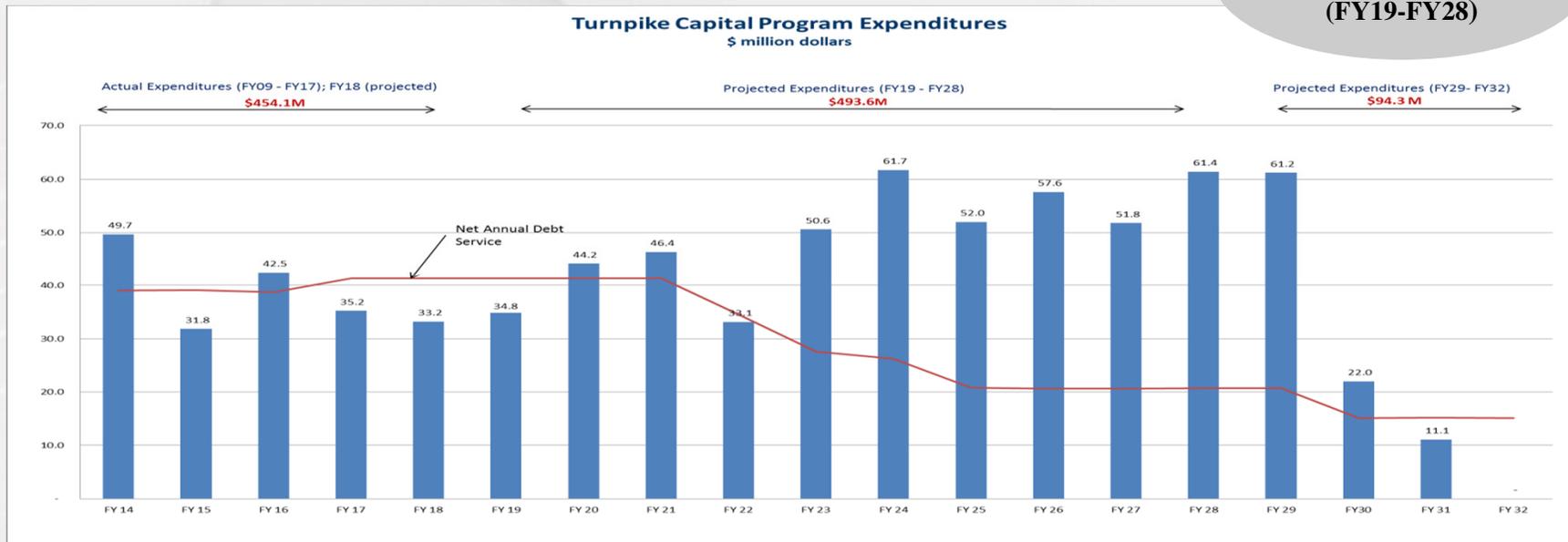
• FY17-FY26 Estimated Program Expenditures

- Pavement (state & federal) – averages \$78M per year
- Bridges (state & federal) – averages \$76M per year
- I-93 Expansion - \$80M through 2022
- Mandate Federal – averages \$33M per year
- Individual Projects- \$831M over ten-year period
- Transit & Airports - \$590M over ten-year period
- Total Program - \$3.74 Billion

Turnpike System Capital Program

Under Current Toll Structure

\$494M Projected Capital Spending (FY19-FY28)



TIMETABLE FOR MAJOR TURNPIKE PROJECTS' CONSTRUCTION

- Construction Dover End & GSB Rehabilitation (\$79M): **2019 - 2022**
- Construction of FEET Widening , Nashua-Bedford (\$127M): **2022 - 2026**
- Manchester Exit 7 Reconstruction (\$52M): **2024 - 2026**
- Manchester Exit 6 Improvements & FEET Widening (\$99M): **2026 - 2029**
- *Bow-Concord: I-93 Widening (I-89 to I-393) (\$132M): **2027 – 2031**

*Only includes Tpk. portion (south of Exit 14), Does not include Federal portion - Est. cost \$178M, completion 2033

Projected Outputs of Draft TYP (2019-2028) with Level Federal Funding

- **Pavement Resurfacing 450 mi/year (estimated 2020-2028)**

- Preservation 133 mi/year
- Light Capital 116 mi/year
- Rehabilitation 12 mi/year
- Additional Crack Seal 165 mi/year

TIFIA Pledged Pavement Resurfacing

- 185 mi/year (estimated)
- Light Capital & Roughness Paving on Poor & Very Poor Roads

- **State-Owned Bridges**

- Rehabilitate / Replace: 79 bridges (61 Red list Bridges)
- Bridge Maintenance (39 Red list Bridges over 4-year period)
- 135 of 140 red list bridges addressed through 2028 including previous TYP projects

TIFIA Pledged Bridge Work

- Rehabilitates/Replaces 23 bridges

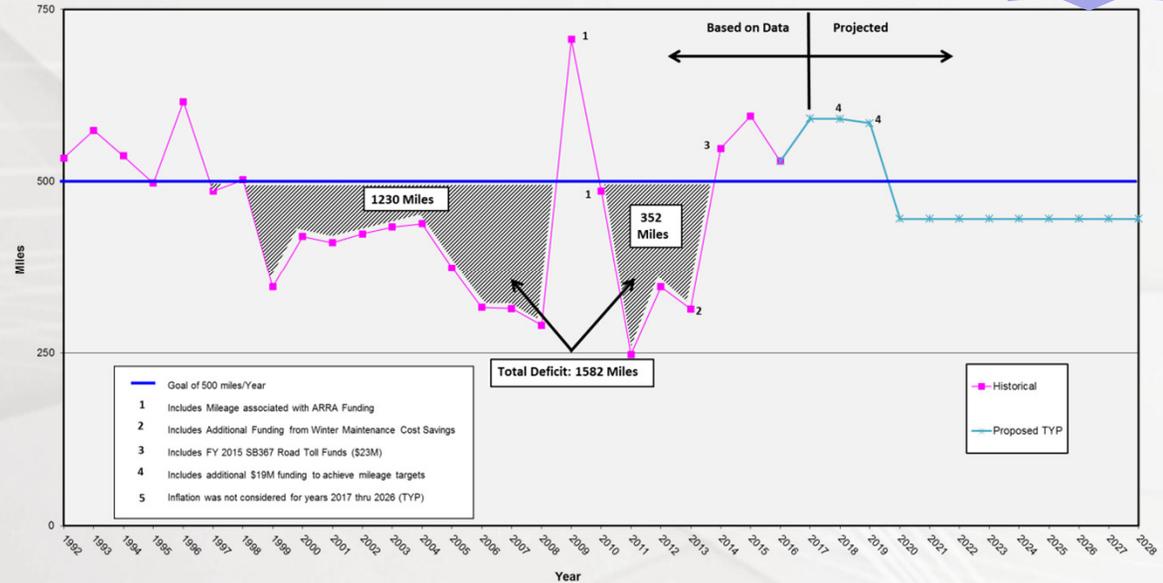
A Look Ahead – Road Condition

Projected values do not include crack seal mileage

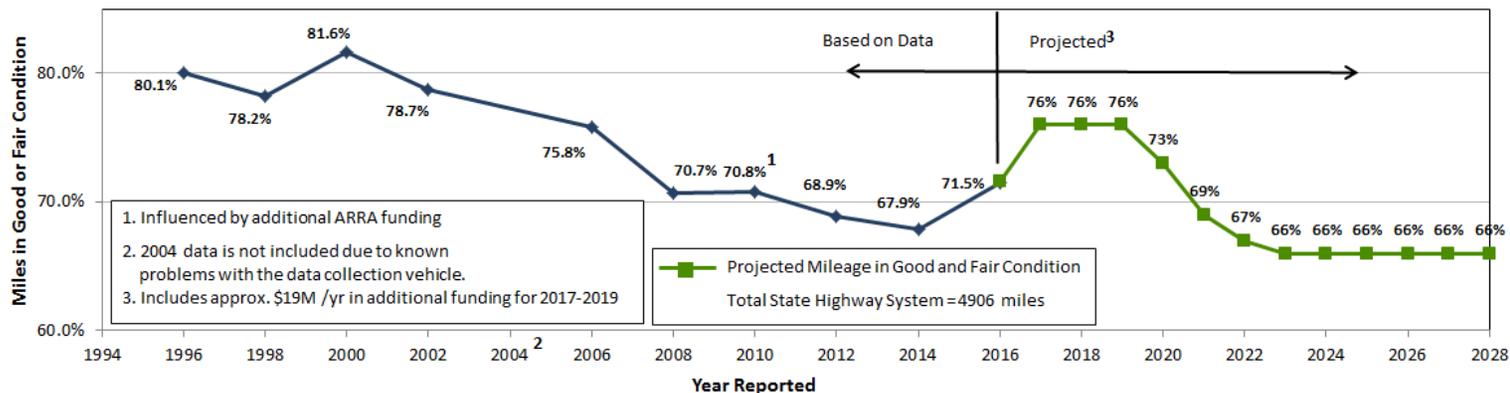
Based on current level of investment in the TYP

- Past years backlog of deficit paving reduced the state’s overall pavement condition from a high of 82% of roads in good or fair condition to a low of 68%
- Current and projected pavement in good or fair condition is expected to rise to 76% with the current level of investment through 2019 then decline to 66% in the outer years of the TYP.

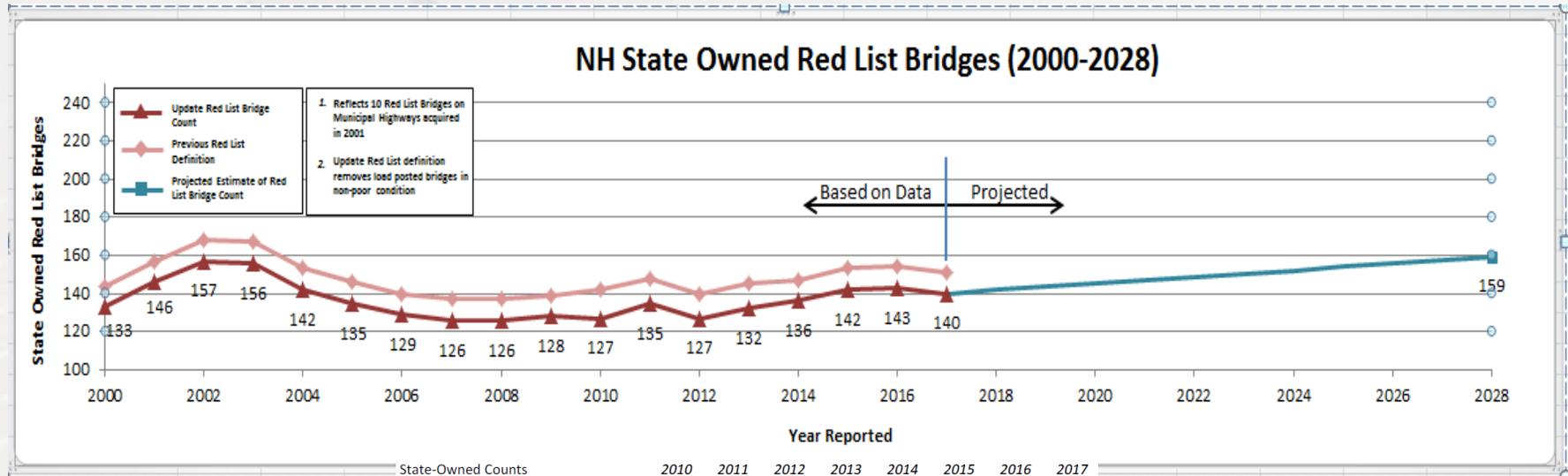
NHDOT Miles of Road Resurfaced
1992 to 2016 Actual; 2017 to 2028 Proposed ⁵



NH Pavement Condition
1996 to 2028



A Look Ahead – State Bridge Condition



State-Owned Counts	2010	2011	2012	2013	2014	2015	2016	2017
Poor Count ("4" or less)	127	135	127	132	136	142	143	140
Fair Count ("5")	254	261	267	271	286	295	295	300
Fair Count ("6")	527	522	517	508	517	506	535	544
Good Count ("7" or greater)	1189	1191	1206	1216	1193	1194	1163	1150
Blank Count (non-hwy/closed)	30	27	26	26	23	23	23	24
Total State-Owned Count	2127	2136	2143	2153	2155	2160	2159	2158

Based on recommended level of investment in draft TYP

- Number of State Red List Bridges (SRL) - which is representative of bridges in poor condition (rating of 4 or lower) **is expected to increase**
- Higher number of fair condition bridges w/ rating of 5 today than 7 years ago
- 135 of 140 red list bridges addressed

- Current SRL bridge total - **140**
- Bridges added to SRL by 2028 - **242**
 - 22 Bridges added annually over last five years – extrapolated to 2028 projects to 242 bridges
- Bridges expected to be removed from SRL by 2028 - **223**
 - **121** removed by Bridge Maintenance forces
 - **102** removed by projects

Unfunded Needs

- **Bridge Investment**

- Additional investment of **\$6M/year** needed for bridge preservation work **(to keep bridges off red-list)**
- Additional investment of **\$24M/year** needed to address additional 8 red list bridges per year (bridges that are anticipated to be added to red list but not addressed during the TYP period – **effectively reduce the red-list by 80 bridges over ten-year period**)

- **Pavement Investment**

- Additional investment of **\$12M/year** needed to **rehabilitate 1% of poor and very poor Tier 2, 3 & 4 roads each year**
- Additional investment of **\$12M/year** needed for the pavement preservation & maintenance program, **to maintain overall pavement condition of state roads at 76% good and fair.**

- **Total Additional Investment of \$54M per year for State Roads & Bridges**

Unfunded Needs (cont.)

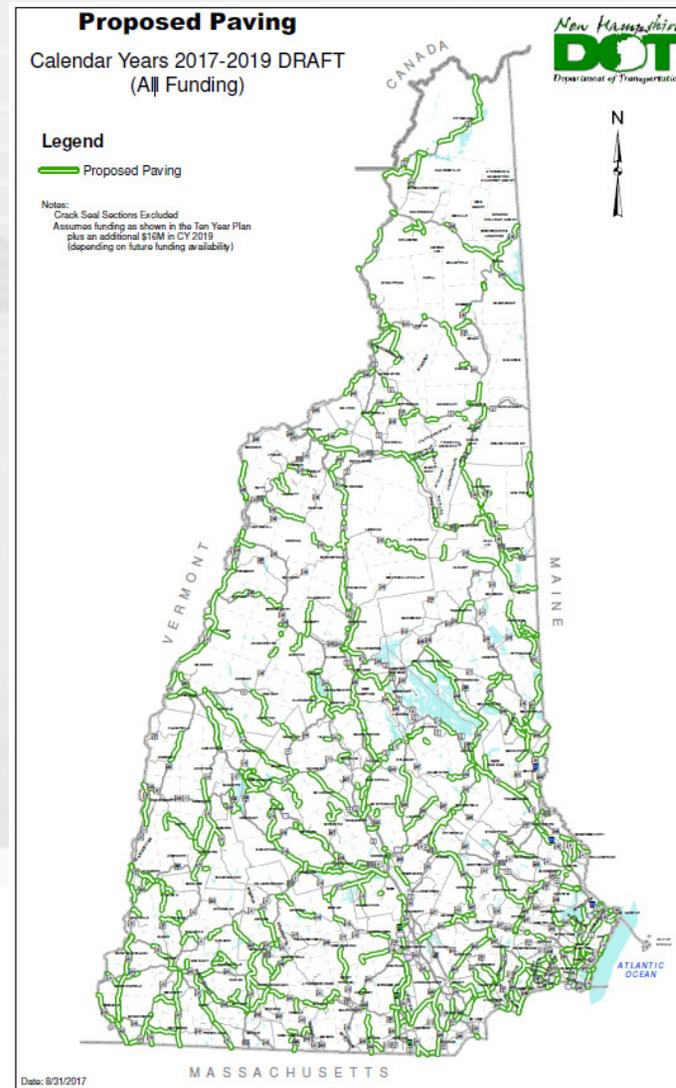
- **Other Assets**
 - Approximately 50,000 **culverts** under state roads will need replacement - additional **\$6 M/year** to replace all within 50 years (\$10K each)
 - Approximately 1130 miles of **guardrail** on state roads – additional **\$3M/year** to replace all within 75 years (\$250K per mile)
 - 300 **signalized intersections** - **\$1 M/year** to replace on a 25 year cycle (\$80K per location)
 - 44 **Rock slopes** identified as high hazard - **\$2 M/year** to address all in 10 years
 - Type 2 **Sound Wall** Program – 37 miles of wall for 49 eligible locations with an estimate cost of **\$125M**

Draft TYP (2019 – 2028) Projects

- **CY2017 – CY2019
Statewide Paving Program**

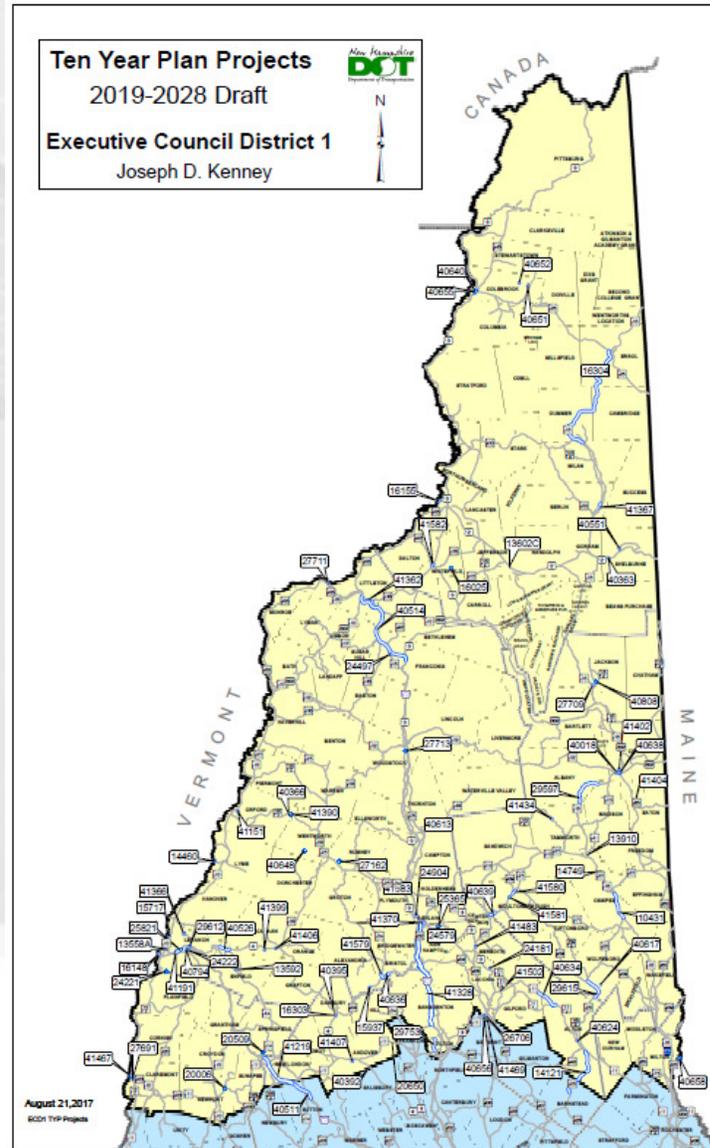
YEAR	EXECUTIVE COUNCIL DISTRICT					STATEWIDE	
	1	2	3	4	5	MILES	BUDGET
2017	300	113	76	46	59	594	\$85.1 M
2018	202	117	65	35	57	475	\$67.4 M
2019	254	151	76	39	64	584	\$77.9 M*
Total	756	381	217	120	180	1,653	\$230.4 M

* Assumes funding as shown in the Ten Year Plan plus an additional \$16 M of on-shelf work (depending on future funding availability)



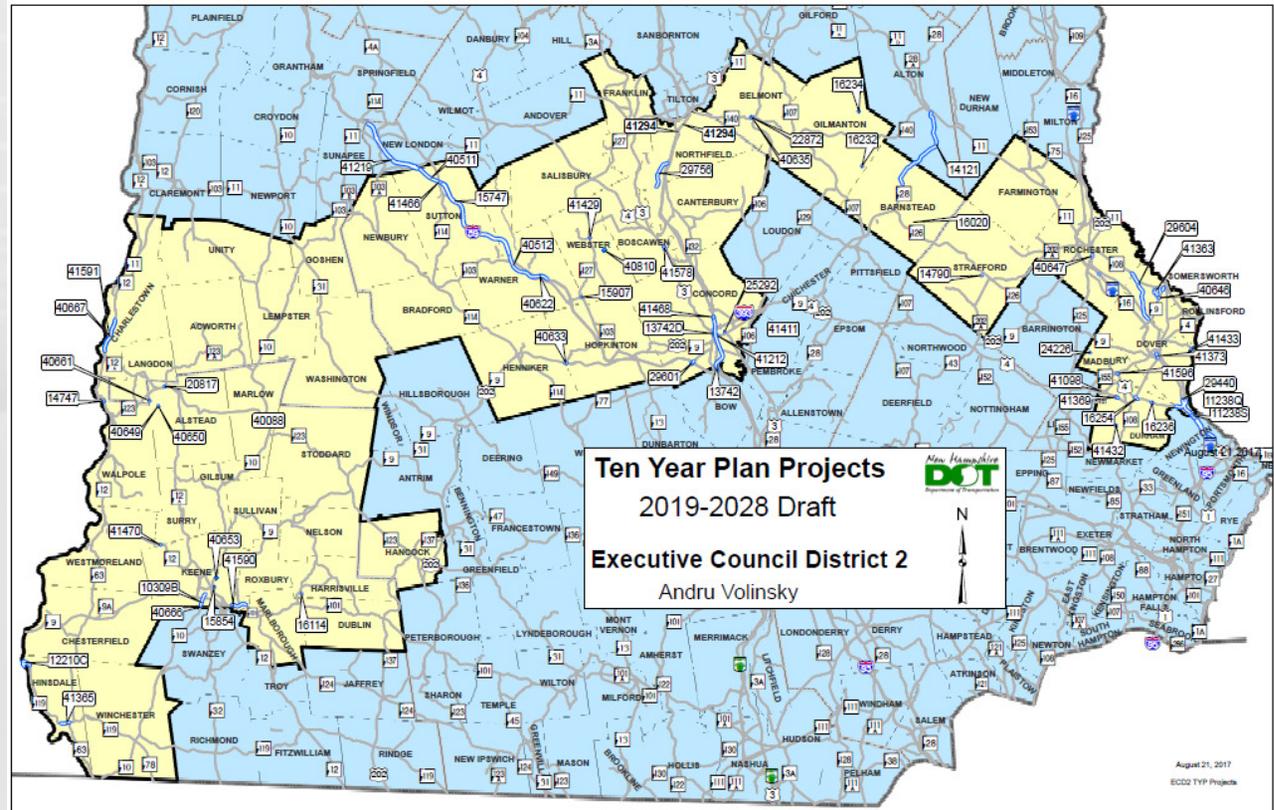
Draft TYP (2019 – 2028) Projects

- **TYP Projects in Executive Council District 1**
 - **Bridge Projects**
 - **Individual Projects**
 - **85 Projects totaling \$322 M**



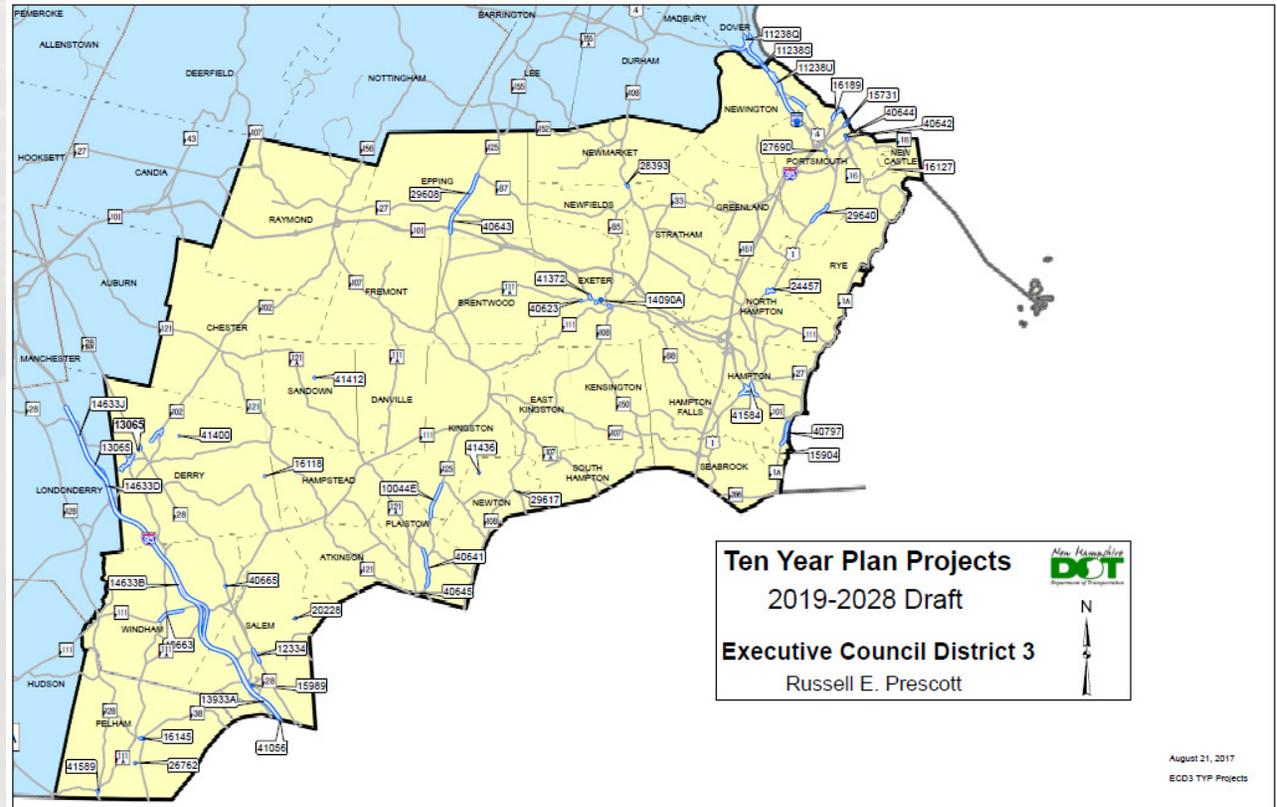
Draft TYP (2019 – 2028) Projects

- **TYP Projects in Executive Council District 2**
 - **Bridge Projects**
 - **Individual Projects**
 - **60 Projects totaling \$458 M**



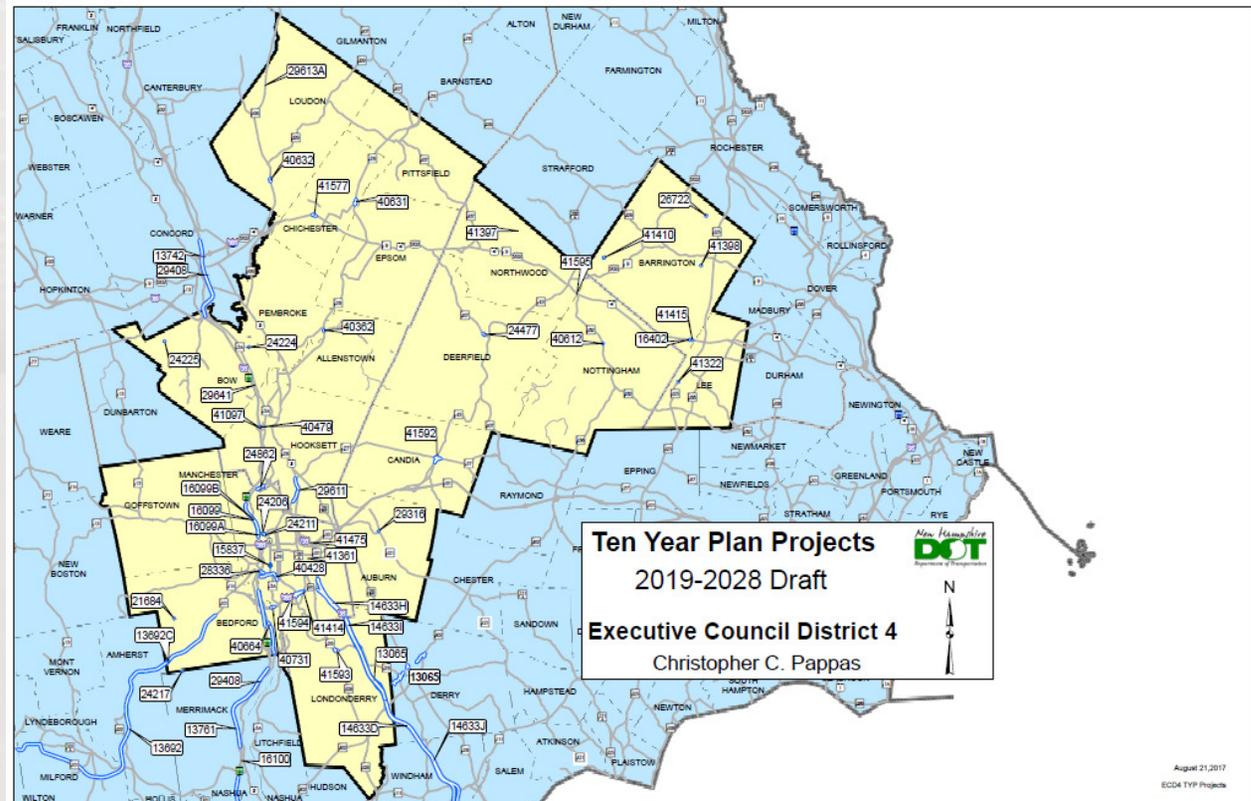
Draft TYP (2019 – 2028) Projects

- **TYP Projects in Executive Council District 3**
 - **Bridge Projects**
 - **Individual Projects**
 - **42 Projects totaling \$318M**



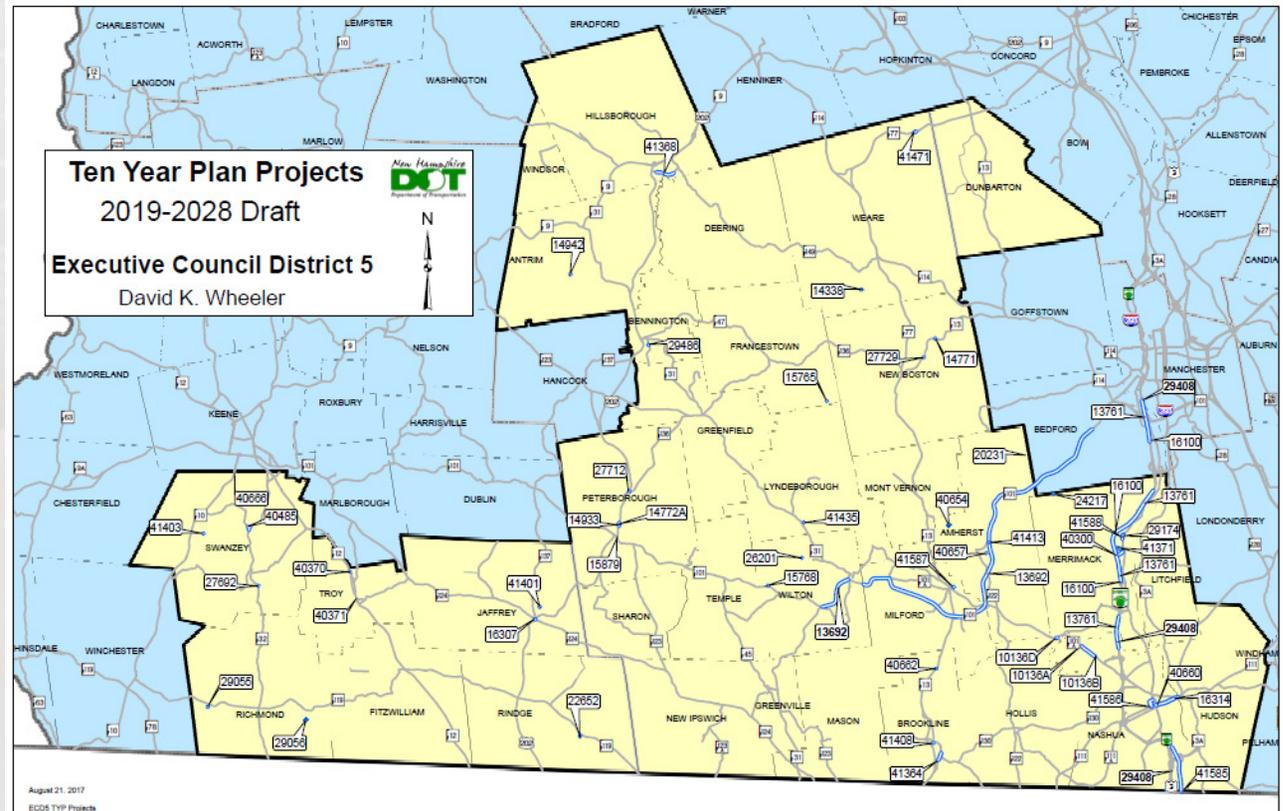
Draft TYP (2019 – 2028) Projects

- **TYP Projects in Executive Council District 4**
 - **Bridge Projects**
 - **Individual Projects**
 - **53 Projects totaling \$595 M**



Draft TYP (2019 – 2028) Projects

- **TYP Projects in Executive Council District 5**
 - **Bridge Projects**
 - **Individual Projects**
 - **50 Projects totaling \$278 M**



THANK YOU

QUESTIONS & COMMENTS

Regional Planning Commission TYP Philosophy & Priorities